

## WHAT IS CLAIMED IS:

1. A location information transmission method for reporting on-road location information on a digital map, characterized in that

5 an information provider reports, as on-road location information;

a string of coordinates line information representing a road shape of a road section including the on-road location having a length determined depending on difficulty of shape matching;

10 additional information including an information item selected from a group of attribute information on a road including said road location and detailed information on nodes in said road section; and

15 relative information indicating said on-road location in said road section, and that

a party that receives said on-road location information performs shape matching to identify said road section on a digital map and uses said relative data to identify the on-road location in said road section.

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2. A location information transmission method according to claim 1, characterized in that a string of coordinates where coordinate data indicating the positions of the nodes and interpolation points included in said road section are arranged

25 sequentially is used as said string of coordinate information.

3. A location information transmission method according to claim 2, characterized in that interpolation points that contribute less to shape matching are omitted out of the interpolation points included in said road section in order to  
5 generate said string of coordinate information.

4. A location information transmission method according to claim 3, characterized in that an interpolation point is omitted where a change in bearing is less than a predetermined angle  
10 with respect to bearing from an adjacent interpolation point or node and a distance from said interpolation point or node is less than a predetermined distance in order to generate said string of coordinates information.

5. A location information transmission method according to claim 2, characterized in that, as said string of coordinate information, coordinate data of a member chosen from a group of nodes and interpolation points included in said road section is represented using absolute coordinates and  
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20 that data of members of nodes and interpolation points excluding said chosen member is represented using relative coordinates.

6. A location information transmission method according to claim 1, characterized in that said additional information includes at least one information item chosen from a group of  
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road type code, road number, toll highway code, number of traffic lanes, regulation information, road width, number of connecting links to a crossing node, and connection angle of each connecting link to a crossing node.

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7. A location information transmission method according to claim 6, characterized in that said additional information includes accuracy information on a digital map data used.

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